



❖ ### Section 1: Multiple Choice Answers



❖ 1. **What is the primary function of a router in a computer network?**

❖ - **c)** Forwarding data packets between networks



❖ 2. **What is the purpose of DHCP (Dynamic Host Configuration Protocol) in a computer network?**

❖ - **d)** Dynamically assigning IP addresses to devices



❖ 3. **Which network device operates at Layer 2 (Data Link Layer) of the OSI model and forwards data packets based on MAC addresses?**

❖ - **b)** Switch



❖ 4. **Which network topology connects all devices in a linear fashion, with each device connected to a central cable or backbone?**

❖ - **b)** Bus



❖ ### True or False Statements



❖ 5. **A VLAN (Virtual Local Area Network) allows network administrators to logically segment a single physical network into multiple virtual networks, each with its own broadcast domain.**

❖ - **True**



❖ 6. **TCP (Transmission Control Protocol) is a connectionless protocol that provides reliable, ordered, and error-checked delivery of data packets over a network.**

❖ - **False** (TCP is a connection-oriented protocol)



❖ 7. **A firewall is a hardware or software-based security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules.**

❖ - **True**



Short Answer Questions



❖ 8. ***Describe the steps involved in setting up a wireless network for a small office or home office (SOHO) environment.***

❖ - ***Steps:***

❖ 1. ***Select a Wireless Router:** Choose a router that meets your speed and range requirements.*

❖ 2. ***Connect the Router:** Plug the router into a power source and connect it to the modem via an Ethernet cable.*

❖ 3. ***Access Router Settings:** Connect to the router using a computer or mobile device and enter the router's IP address in a web browser.*

❖ 4. ***Configure Wireless Settings:** Set the SSID (network name), choose a security type (WPA2 is recommended), and set a strong password.*

❖ 5. ***Configure DHCP Settings:** Ensure DHCP is enabled to automatically assign IP addresses to devices.*

❖ 6. ***Save Settings and Reboot:** Save the configuration and reboot the router if necessary.*

❖ 7. ***Connect Devices:** Connect devices to the wireless network using the SSID and password.*



❖ 9. ***Demonstrate how to configure a router for Internet access using DHCP (Dynamic Host Configuration Protocol).***

❖ - ***Steps:***

❖ 1. ***Log into the Router:** Access the router's web interface using a browser.*

❖ 2. ***Locate DHCP Settings:** Find the DHCP settings under the network configuration section.*

❖ 3. ***Enable DHCP:** Ensure the DHCP server option is enabled.*

❖ 4. ***Set IP Range:** Define the range of IP addresses that the DHCP server can assign to devices.*

❖ 5. ***Save Changes:** Apply the changes and reboot the router if prompted.*



❖ 10. ***Discuss the importance of network documentation in the context of building and managing networks.***

- ❖ - *****Importance:*****
- ❖ - *****Clarity:***** *Provides a clear understanding of network structure and configuration.*
- ❖ - *****Troubleshooting:***** *Aids in identifying issues and resolving them quickly.*
- ❖ - *****Planning:***** *Facilitates future upgrades and expansions by providing a roadmap.*
- ❖ - *****Compliance:***** *Helps in meeting regulatory requirements by maintaining accurate records.*
- ❖ - *****Training:***** *Serves as a resource for training new staff on network operations.*
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